# Formative Assessment for Michigan Educators

## The District Perspective

Michigan School Testing Conference
Thursday, February 23, 2012
Session E4

# Session Topics

- How can a state respond to the formative assessment literacy need of Michigan educators?
- How has a district implemented the FAME model? 2 perspectives
- What has been the impact on teacher practice and evidence of student learning?
- How might your district or building join in the journey?

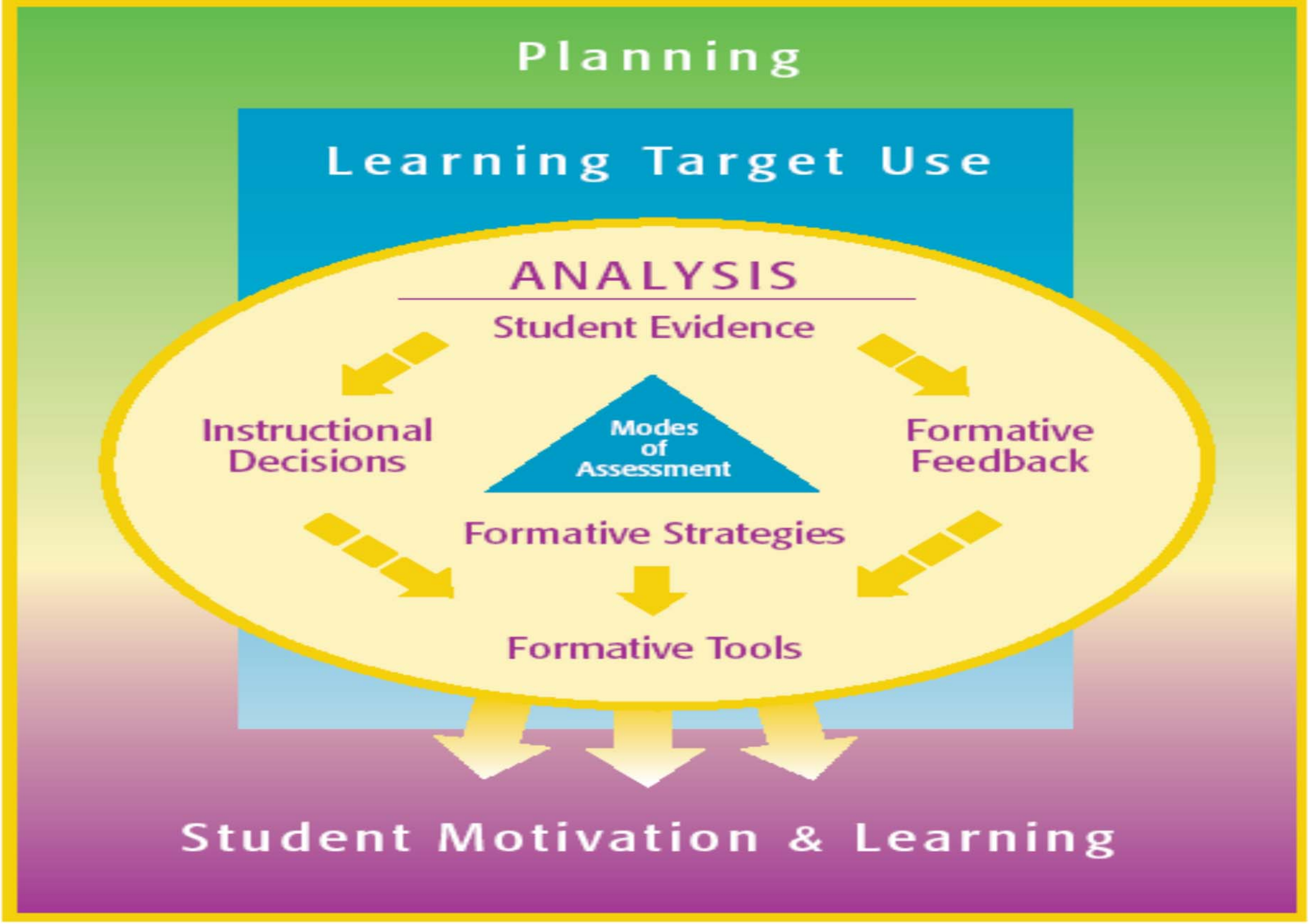
# Michigan FAME Model

- Coach/Learning Team Facilitator
  - Teacher or Administrator
- Learning Team
  - Usually 6 – 8 team members
  - Composition of team varies depending on school/district formative assessment plan/initiative and needs
  - Voluntary; have an interest in exploring classroom practice
- Coach and Learning Team attend FAME launch in the fall
  - Meetings held within school/district during rest of year (when, meeting length, etc. varies)

# Michigan FAME Model (cont'd)

- Team collaboratively decides meeting agenda and learning topics
- Resources available to participating schools/districts from FAME website
  - Also from other learning teams
- Permissible to use Title II, Part A funds
  - Must be in Consolidated Application and School/District Improvement Plan
  - Restrictions Apply (see Field Services Title II, Part A Frequently Asked Questions for more information)

# The Formative Assessment Process



Planning

Learning Target Use

ANALYSIS

Student Evidence

Instructional Decisions

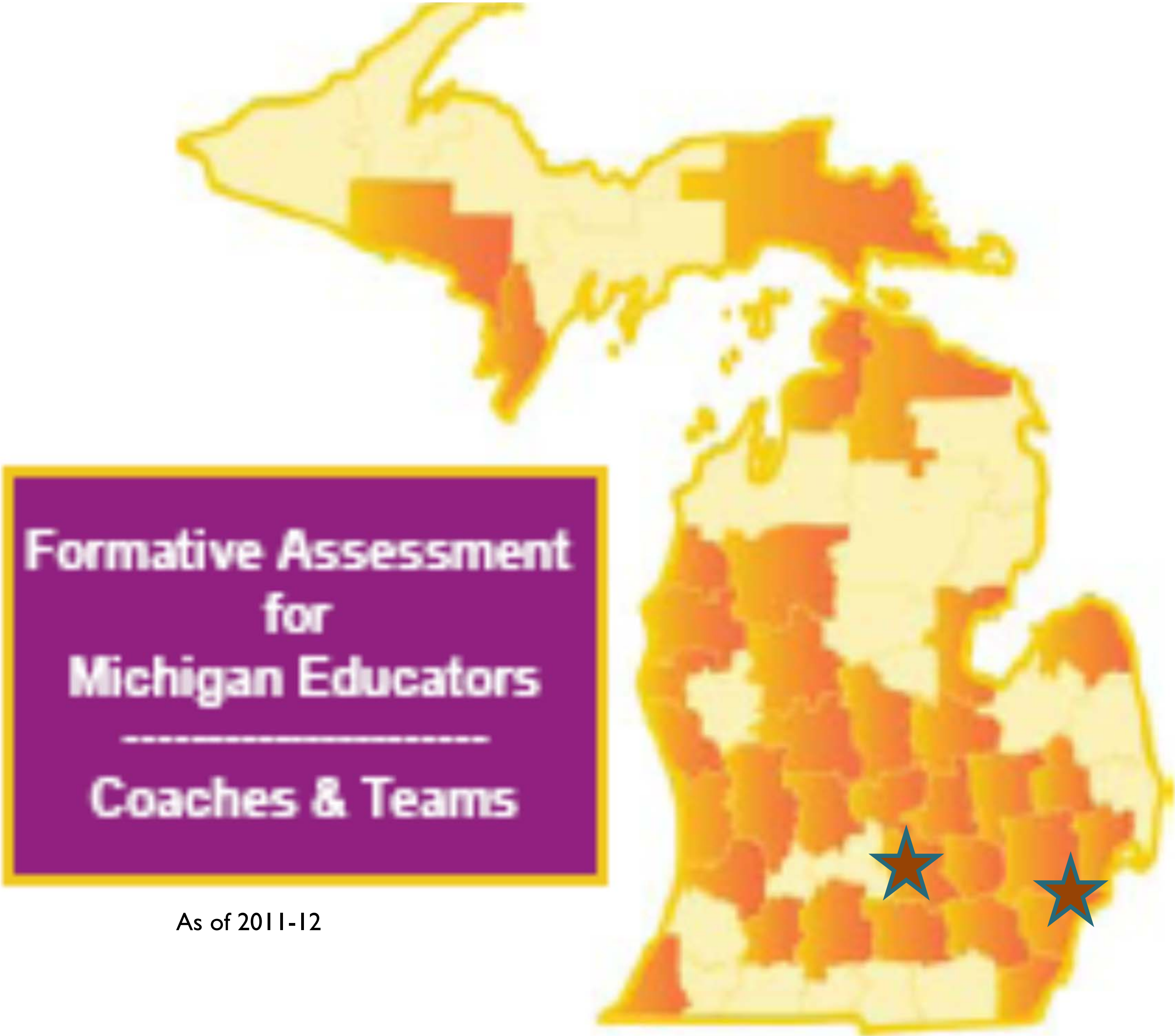
Modes of Assessment

Formative Feedback

Formative Strategies

Formative Tools

Student Motivation & Learning



# Formative Assessment for Michigan Educators

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## Coaches & Teams

As of 2011-12

# Warren Woods Public Schools

- Year 1
- Two teams
- Team 1- was a 6th grade team at the middle school, coached by a teacher
- Team 2- was a multi-building team, coached by an administrator

- Year 2
- One team
- High school teacher, three middle school teachers, one elementary teacher,
- Coached by an administrator

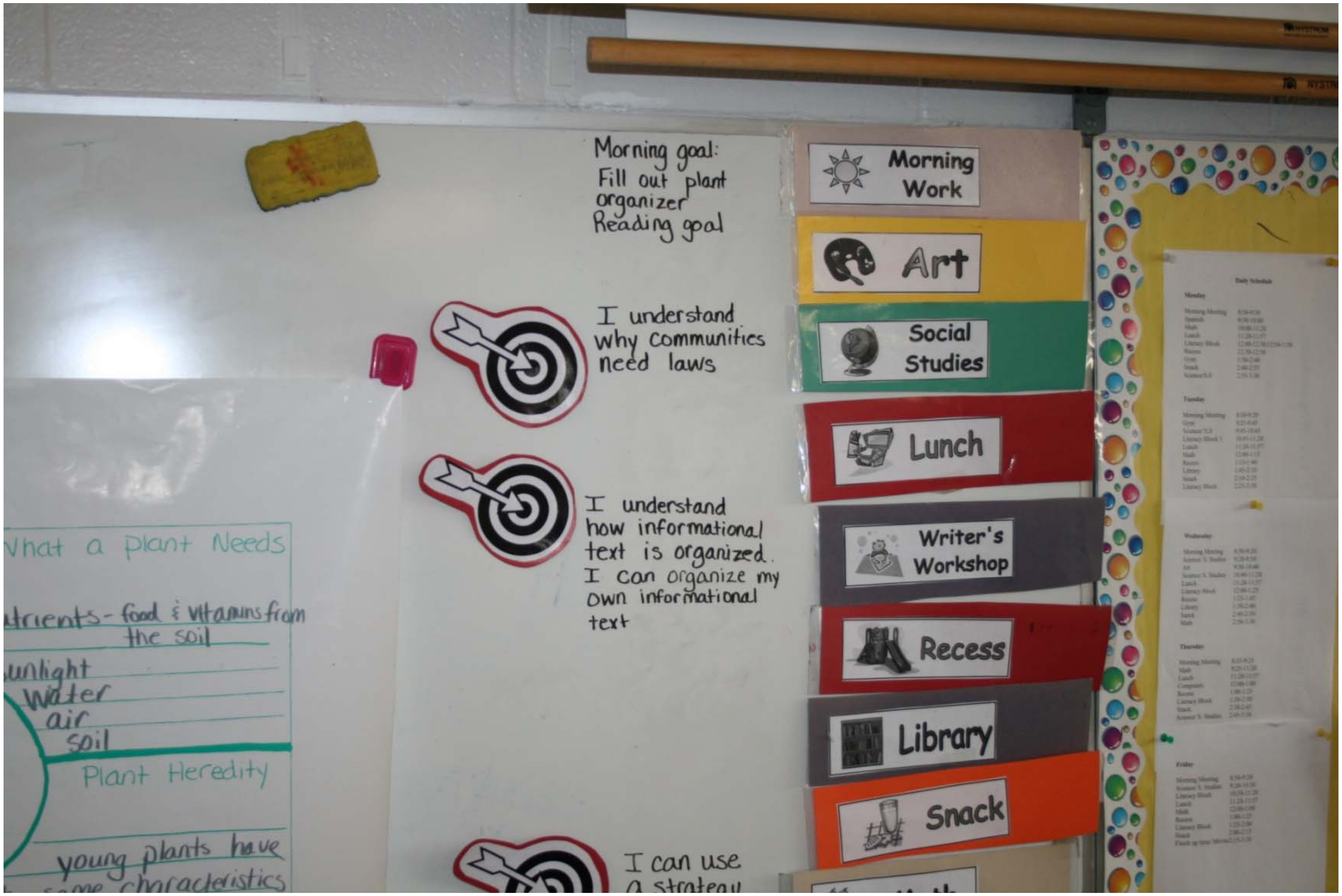
# How did we begin?

- We found interested teachers
- We meet once a month after school
- We determine the agenda & topics
- We share our experiences and ideas

# Teacher Practice

- Focus on the following:
  - Determining the learning target
  - Self- Assessment
  - Peer Assessment
  - Feedback
  - Goal Setting

# Learning Targets in Use



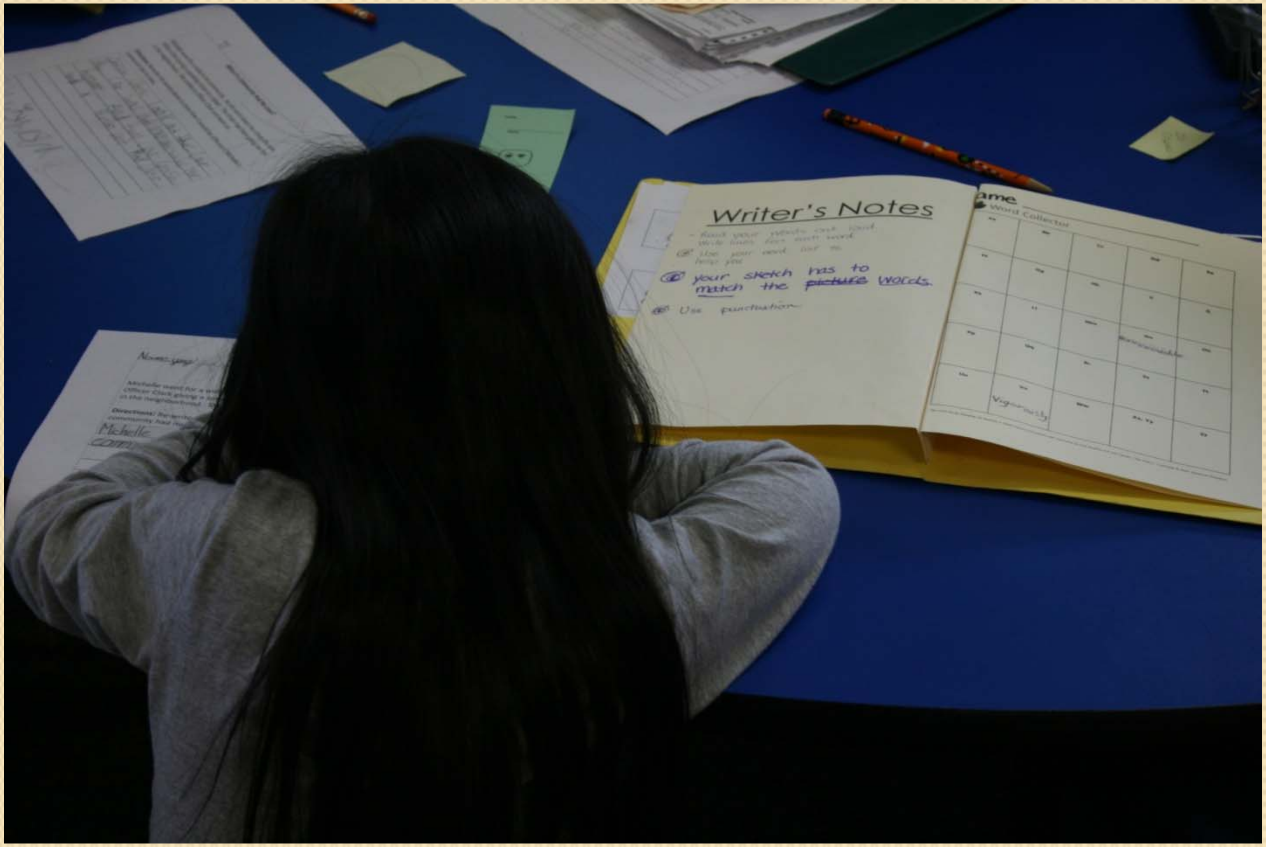
# Goal Setting

I can identify the parts of a story!

## Self- Assessment

# FEEDBACK USE

I want you to notice I used capital letters in my writing today.



# Formative Assessment tools

- 25 Word Summary
    - Peer Assessment
    - Formative Feedback

- Daily Tweet
    - Learning target reflection
    - Exit Card

# Evidence of Learning

- Involved with Michigan State University's research project
- Collecting data from teachers in the project and not in the project
- Collecting Student Surveys about what teachers do in the classroom

# Where do we go from here?

- Our hope is to build the project throughout the district
  - Reaching out to department heads at all levels
  - Inviting new teachers to form a team next year
  - Working with building administrators
  - Building the capacity of all staff

# Holt Public Schools

Year 1

- One team
- Multi-grade Team spanning 3 buildings
- All Math teachers

Year 2

- Continued the first team with 3 new members
- Added a new team multi-subject area and multi-building team coached by a teacher

# Holt Public Schools

Year 3

- Continued original two teams
- Added PLC's at the building level
- Building wide focus on student friendly standards
- More buildings and many more people
- Lot's of new coaches (10) and a new team

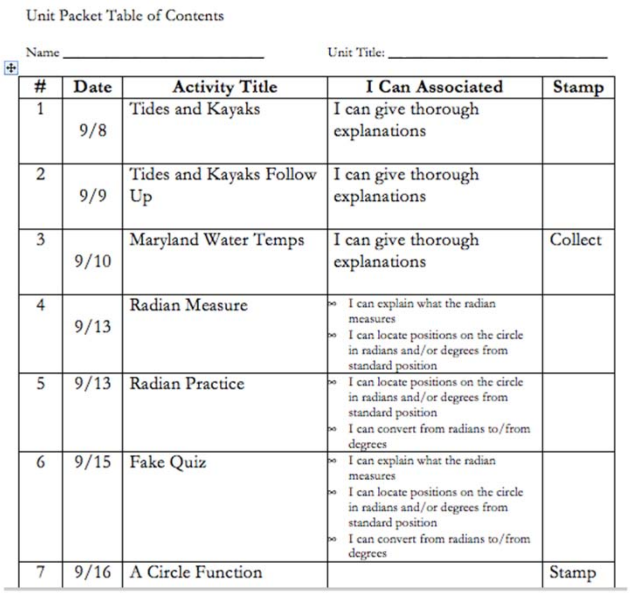
# How did we begin?

- Started to lay some groundwork
- We found/recruited interested teachers
- Had an intensive week long summer launch
- The participated in the launch
- Team plans the meetings
- Sharing portion
- Bring something/try something

# Teacher Practice

- Clarify the learning targets
- Self- Assessment and Peer Assessment
- Valuable Feedback
- Rubrics and Exemplars
- Action Research
- Focus on Quality instead of completion
- Grading Changes
- Building Capacity

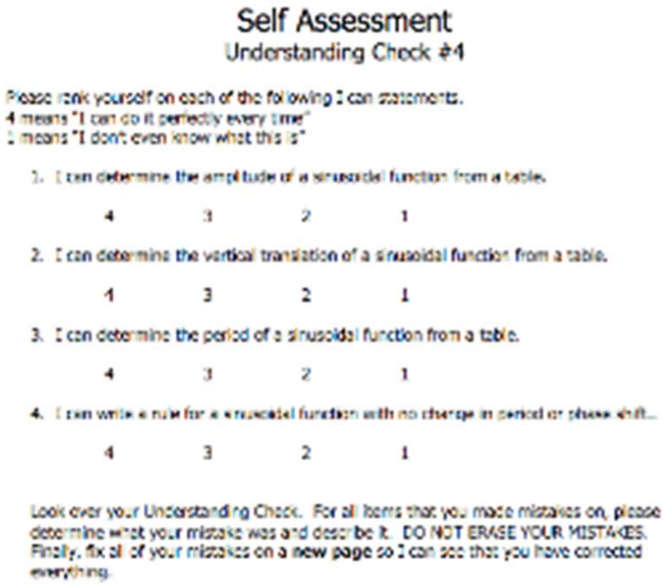
# Clarifying Learning Targets



Unit Packet Table of Contents

Name ________________________ Unit Title: __________________________

| # | Date | Activity Title | I Can Associated | Stamp |
|---|---|---|---|---|
| 1 | 9/8 | Tides and Kayaks | I can give thorough explanations | |
| 2 | 9/9 | Tides and Kayaks Follow Up | I can give thorough explanations | |
| 3 | 9/10 | Maryland Water Temps | I can give thorough explanations | Collect |
| 4 | 9/13 | Radian Measure | I can explain what the radian measures<br>I can locate positions on the circle in radians and/or degrees from standard position | |
| 5 | 9/13 | Radian Practice | I can locate positions on the circle in radians and/or degrees from standard position<br>I can convert from radians to/from degrees | |
| 6 | 9/15 | Fake Quiz | I can explain what the radian measures<br>I can locate positions on the circle in radians and/or degrees from standard position<br>I can convert from radians to/from degrees | |
| 7 | 9/16 | A Circle Function | | Stamp |



## Self Assessment
### Understanding Check #4

Please rank yourself on each of the following I can statements.
4 means "I can do it perfectly every time"
1 means "I don't even know what this is"

1. I can determine the amplitude of a sinusoidal function from a table.

   4 3 2 1

2. I can determine the vertical translation of a sinusoidal function from a table.

   4 3 2 1

3. I can determine the period of a sinusoidal function from a table.

   4 3 2 1

4. I can write a rule for a sinusoidal function with no change in period or phase shift.

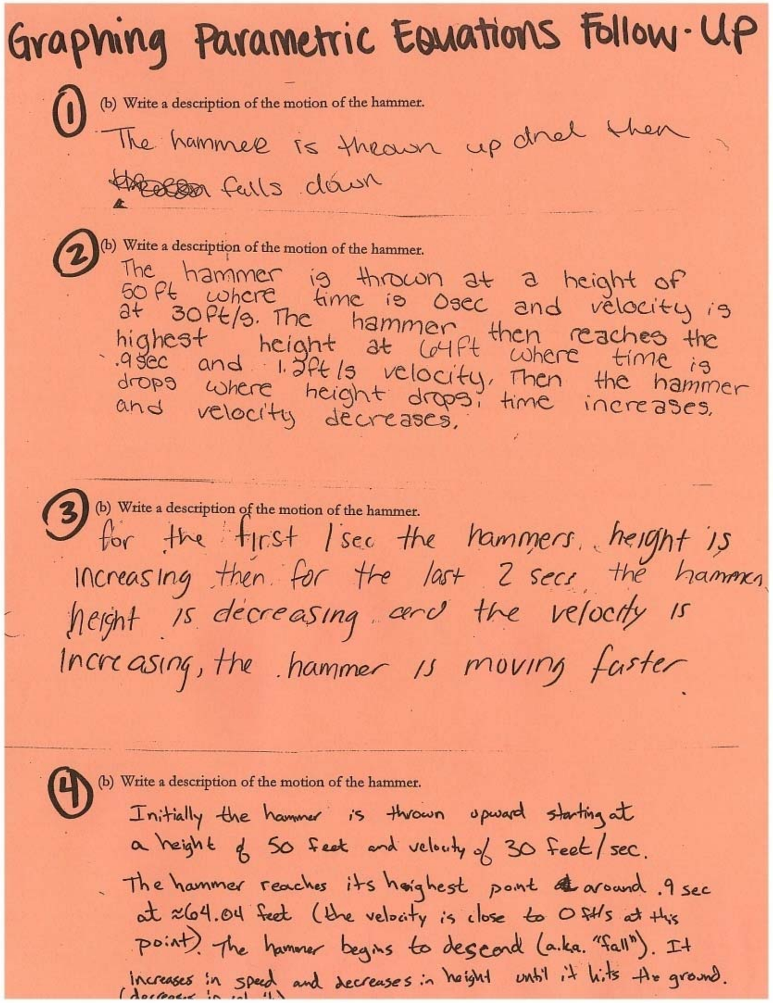
   4 3 2 1

Look over your Understanding Check. For all items that you made mistakes on, please determine what your mistake was and describe it. DO NOT ERASE YOUR MISTAKES. Finally, fix all of your mistakes on a new page so I can see that you have corrected everything.

# Clarifying Learning Targets

| | Secure (S) | Developing (D) | Beginning (B) |
|---|---|---|---|
| Communication | • My work shows what I did and what I was thinking while I worked the problem<br>• I've explained why my answer makes sense<br>• I used mathematical terms correctly<br>• I used pictures, symbols, and/or diagrams when they made my explanation clearer<br>• My explanation was clear and organized<br>• My explanation includes enough detail so no one has questions on what my work represents | • I explained some of my steps in solving the problem<br>• Someone might have to add some info for my explanation to be easy to follow<br>• Some of the math terms I use make sense and help in my explanation<br>• I explained my answer, but not my thinking<br>• My explanation started out well, but bogged down in the middle<br>• When I used pictures, symbols, and/or diagrams, they were incomplete or only helped my explanation a little bit | • I'm not sure how much detail I need in order to help someone understand what I did<br>• I don't know what to write<br>• I can't figure out how to get my ideas in order<br>• I'm not sure I used math terms correctly<br>• My explanation is mostly copying the original problem<br>• The pictures, symbols, and/or diagrams I used would not help someone understand what I did |

# Clarifying Learning Targets



Graphing Parametric Equations Follow-Up

1 (b) Write a description of the motion of the hammer.

The hammee is theown up dnel then falls down

2 (b) Write a description of the motion of the hammer.

The hammer is thrown at a height of 50 ft where time is 0sec and velocity is at 30ft/s. The hammer then reaches the highest height at 64ft where time is .9sec and 1.2ft/s velocity. Then the hammer drops where height drops, time increases, and velocity decreases.

3 (b) Write a description of the motion of the hammer.

for the first 1 sec the hammers height is increasing then for the last 2 secs the hammers height is decreasing and the velocity is increasing, the hammer is moving faster.

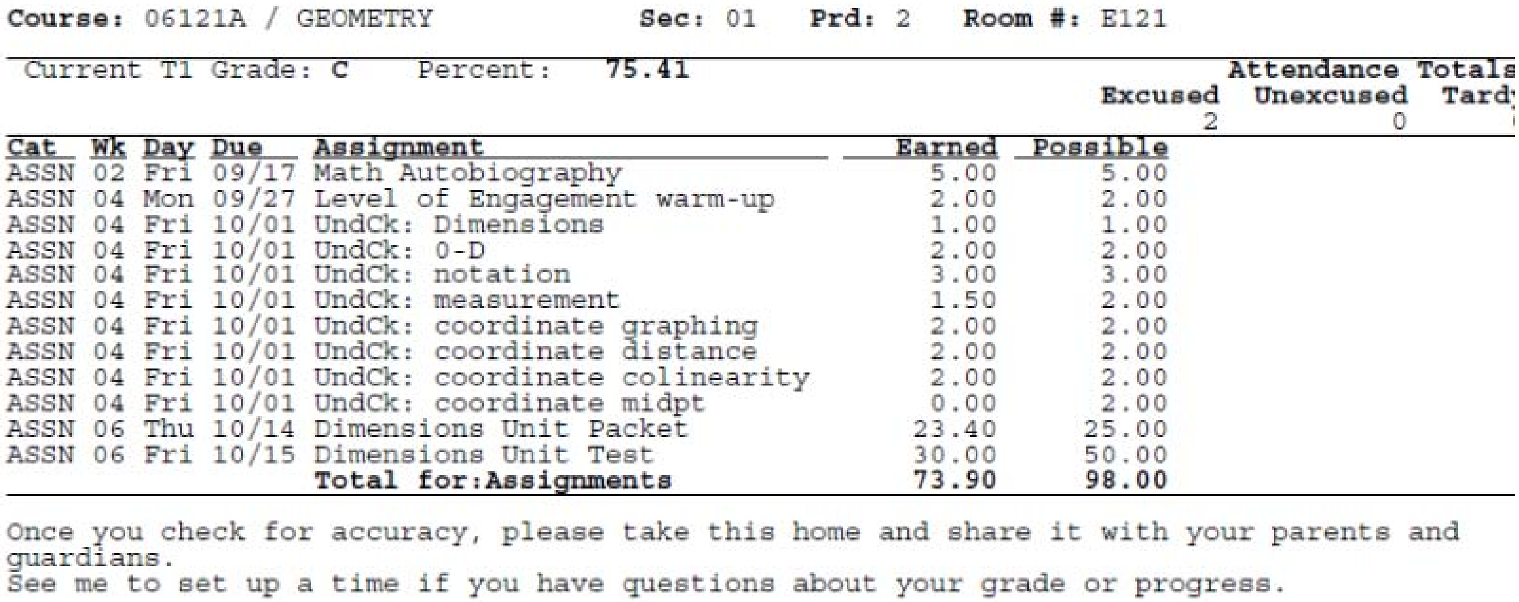
4 (b) Write a description of the motion of the hammer.

Initially the hammer is thrown upward starting at a height of 50 feet and velocity of 30 feet/sec.
The hammer reaches its highest point around .9 sec at ≈64.04 feet (the velocity is close to 0 ft/s at this point). The hammer begins to descend (a.k.a. "fall"). It increases in speed and decreases in height until it hits the ground.

# Action Research

| Results | | | | | | | |
|---|---|---|---|---|---|---|---|
| Task 1 (n = 59) | | | | Task 2 (n=59) | | | |
| Secure | Developing | Beginning | Novice | Secure | Developing | Beginning | Novice |
| 2 | 13 | 35 | 9 | 10 | 35 | 14 | 0 |
| Average: | 1.13559322 | | | Average: | 1.93220339 | | |

# Grading Change



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Course: 06121A / GEOMETRY              Sec: 01    Prd: 2    Room #: E121

 Current T1 Grade: C     Percent:    75.41                          Attendance Totals
                                                              Excused  Unexcused  Tard
                                                                    2          0

Cat  Wk Day Due   Assignment                            Earned  Possible
ASSN 02 Fri 09/17 Math Autobiography                      5.00      5.00
ASSN 04 Mon 09/27 Level of Engagement warm-up             2.00      2.00
ASSN 04 Fri 10/01 UndCk: Dimensions                       1.00      1.00
ASSN 04 Fri 10/01 UndCk: 0-D                              2.00      2.00
ASSN 04 Fri 10/01 UndCk: notation                         3.00      3.00
ASSN 04 Fri 10/01 UndCk: measurement                      1.50      2.00
ASSN 04 Fri 10/01 UndCk: coordinate graphing              2.00      2.00
ASSN 04 Fri 10/01 UndCk: coordinate distance              2.00      2.00
ASSN 04 Fri 10/01 UndCk: coordinate colinearity           2.00      2.00
ASSN 04 Fri 10/01 UndCk: coordinate midpt                 0.00      2.00
ASSN 06 Thu 10/14 Dimensions Unit Packet                 23.40     25.00
ASSN 06 Fri 10/15 Dimensions Unit Test                   30.00     50.00
                  Total for:Assignments                  73.90     98.00

Once you check for accuracy, please take this home and share it with your parents and
guardians.
See me to set up a time if you have questions about your grade or progress.
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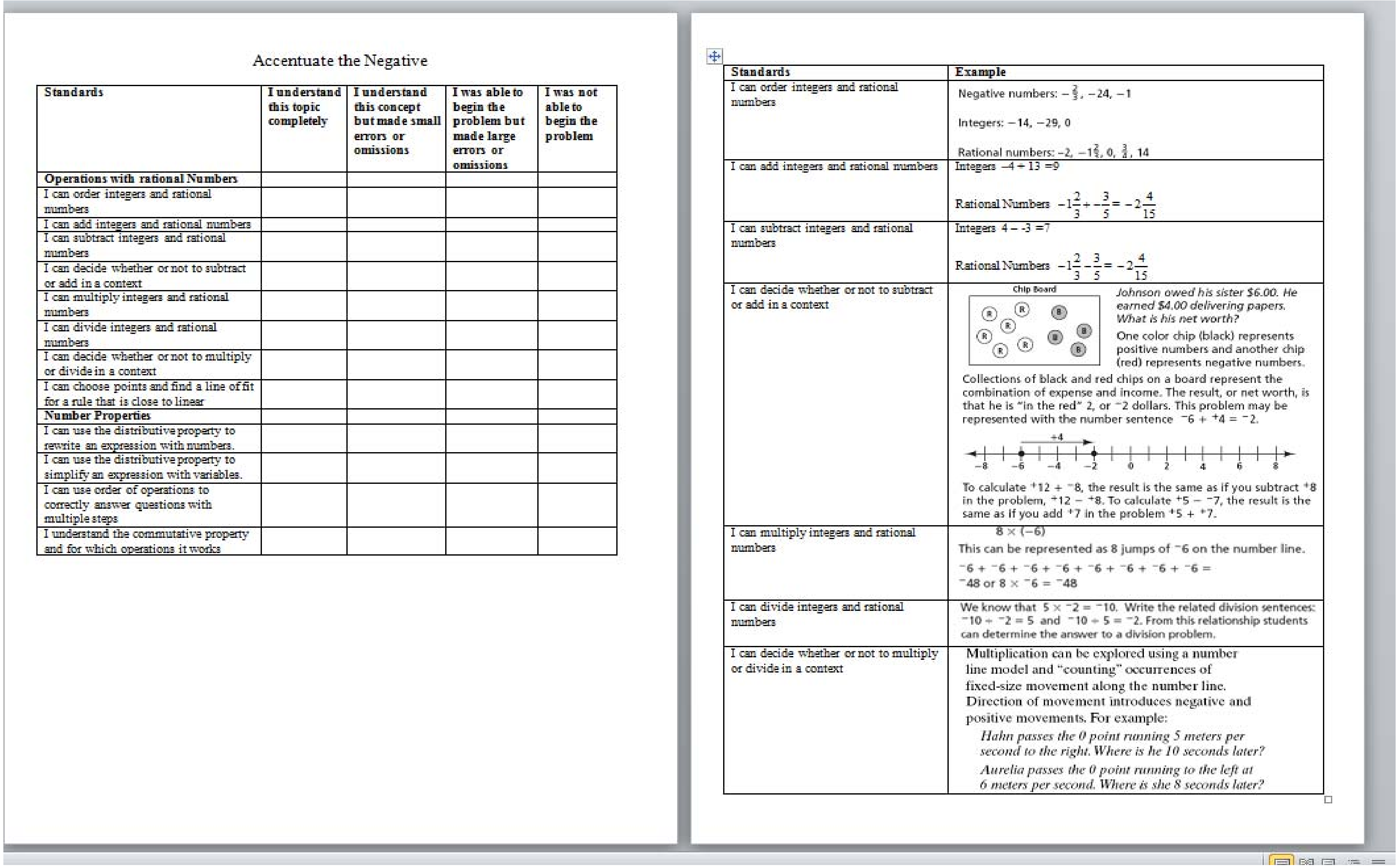
# Rethinking Intervention and Accommodation

- Specific Targets and Goals
- Activate Students as Owners of their own Knowledge
- Time is a variable, Learning is Fixed
- Opportunities to display knowledge
- Summer school Differences and After School Program

# Rethinking Intervention and Accommodation



Accentuate the Negative

| Standards | I understand this topic completely | I understand this concept but made small errors or omissions | I was able to begin the problem but made large errors or omissions | I was not able to begin the problem |
|---|---|---|---|---|
| **Operations with rational Numbers** | | | | |
| I can order integers and rational numbers | | | | |
| I can add integers and rational numbers | | | | |
| I can subtract integers and rational numbers | | | | |
| I can decide whether or not to subtract or add in a context | | | | |
| I can multiply integers and rational numbers | | | | |
| I can divide integers and rational numbers | | | | |
| I can decide whether or not to multiply or divide in a context | | | | |
| I can choose points and find a line of fit for a rule that is close to linear | | | | |
| **Number Properties** | | | | |
| I can use the distributive property to rewrite an expression with numbers. | | | | |
| I can use the distributive property to simplify an expression with variables. | | | | |
| I can use order of operations to correctly answer questions with multiple steps | | | | |
| I understand the commutative property and for which operations it works | | | | |

| Standards | Example |
|---|---|
| I can order integers and rational numbers | Negative numbers: $-\frac{2}{3}, -24, -1$<br>Integers: $-14, -29, 0$<br>Rational numbers: $-2, -1\frac{2}{3}, 0, \frac{3}{4}, 14$ |
| I can add integers and rational numbers | Integers $-4 + 13 = 9$<br>Rational Numbers $-1\frac{2}{3} + -\frac{3}{5} = -2\frac{4}{15}$ |
| I can subtract integers and rational numbers | Integers $4 - -3 = 7$<br>Rational Numbers $-1\frac{2}{3} - \frac{3}{5} = -2\frac{4}{15}$ |
| I can decide whether or not to subtract or add in a context | *Johnson owed his sister $6.00. He earned $4.00 delivering papers. What is his net worth?*<br>One color chip (black) represents positive numbers and another chip (red) represents negative numbers.<br>Collections of black and red chips on a board represent the combination of expense and income. The result, or net worth, is that he is "in the red" 2, or $^{-}2$ dollars. This problem may be represented with the number sentence $^{-}6 + {}^{+}4 = {}^{-}2$.<br>To calculate $^{+}12 + {}^{-}8$, the result is the same as if you subtract $^{+}8$ in the problem, $^{+}12 - {}^{+}8$. To calculate $^{+}5 - {}^{-}7$, the result is the same as if you add $^{+}7$ in the problem $^{+}5 + {}^{+}7$. |
| I can multiply integers and rational numbers | $8 \times (-6)$<br>This can be represented as 8 jumps of $^{-}6$ on the number line.<br>$^{-}6 + {}^{-}6 + {}^{-}6 + {}^{-}6 + {}^{-}6 + {}^{-}6 + {}^{-}6 + {}^{-}6 = {}^{-}48$ or $8 \times {}^{-}6 = {}^{-}48$ |
| I can divide integers and rational numbers | We know that $5 \times {}^{-}2 = {}^{-}10$. Write the related division sentences: $^{-}10 \div {}^{-}2 = 5$ and $^{-}10 \div 5 = {}^{-}2$. From this relationship students can determine the answer to a division problem. |
| I can decide whether or not to multiply or divide in a context | Multiplication can be explored using a number line model and "counting" occurrences of fixed-size movement along the number line. Direction of movement introduces negative and positive movements. For example:<br>*Hahn passes the 0 point running 5 meters per second to the right. Where is he 10 seconds later?*<br>*Aurelia passes the 0 point running to the left at 6 meters per second. Where is she 8 seconds later?* |

# Where do we go from here?

- Continue to grow and improve
  - Administrators trained as coaches and members of teams
  - Grading system pilots
  - Get really good
  - More Subject Area and Cross Discipline Teams
  - People are interested in joining

# Presenters

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